MIDMARK®

M4•9 Sterilizer Calibration Procedures

CALIBRATION PROCEDURES (M4•9 STERILIZER)

When replacing a Steam temperature sensor (RTD), pressure transducer or main P.C. board it will be necessary to assure the components and system are calibrated. Use the following steps and tables to calibrate the system. Refer to the M4•9 Sterilizer Service and Parts Manual for specific procedures on panel removal, etc.

NOTE: When an Auxiliary (lower or trough) Temperature Sensor (RTD) is replaced, calibration is not required.

When changing a P.C. Board:

You **must** have the Pressure Span, Pressure Offset, and Steam Offset calibration data from P.C. Board being replaced. This information can be obtained two ways:

(1) Documentation is supplied with sterilizer

(2) Use SW2 dipswitches #2 and #3 to recover data before replacing P.C. Board:

a.) Dipswitch #2: Pressure Span and Offset.
b.) Dipswitch #3: Steam Offset.

(3) After P.C. Board has been replaced re-enter old calibration data:

(4) Use SW2 dipswitch #2 to enter Pressure Span and Pressure Offset data. (Refer to Pressure Calibration).

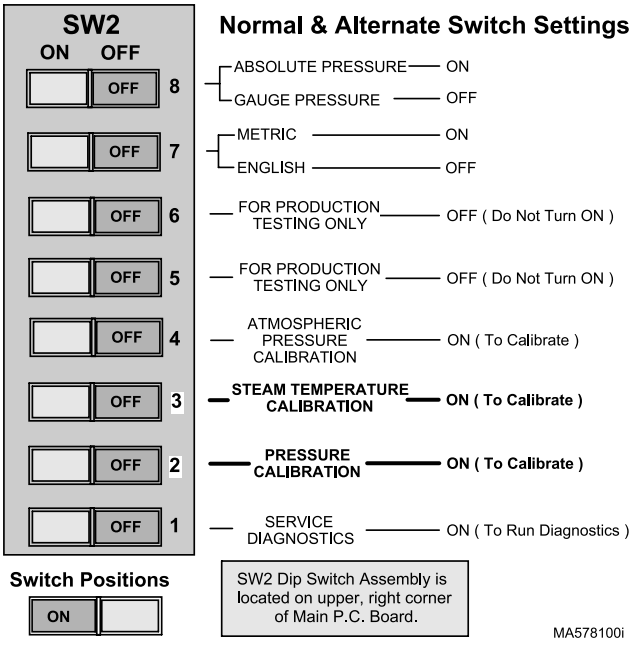
(5) Use SW2 dipswitch #3 to enter Steam Offset data. (Refer to Temperature Calibration).

If a Pressure Transducer or Steam (Side) Temperature Sensor (RTD) is being replaced:

(1) Recover the old data from the unit using SW2 dipswitch #2 (Pressure) and #3 (Temperature) and record for reference.

(2) Replace the component (Transducer or Temp. Sensor).
NOTE: Apply Loctite 567 (enclosed) to threads of Temperature Sensor before installation.

Enter the new calibration data that came with the component using the appropriate SW2 dipswitch, #2 for Pressures, #3 for Temperature.


SW2
ON OFF
Normal & Alternate Switch Settings
OFF 8
ABSOLUTE PRESSURE — ON
GAUGE PRESSURE — OFF
OFF 7
METRIC — ON
ENGLISH — OFF
OFF 6
FOR PRODUCTION TESTING ONLY — OFF (Do Not Turn ON)
OFF 5
FOR PRODUCTION TESTING ONLY — OFF (Do Not Turn ON)
OFF 4
ATMOSPHERIC PRESSURE CALIBRATION — ON (To Calibrate)
OFF 3
STEAM TEMPERATURE CALIBRATION — ON (To Calibrate)
OFF 2
PRESSURE CALIBRATION — ON (To Calibrate)
OFF 1
SERVICE DIAGNOSTICS — ON (To Run Diagnostics)
Switch Positions
ON
SW2 Dip Switch Assembly is located on upper, right corner of Main P.C. Board.
MA578100i

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TEMPERATURE CALIBRATION

Steam (Side) Temperature Calibration (SW2 #3 Switch)	
Display	**Action**
	WARNING: Unplug Unit. Place SW2 dip switch **#3 ON**. (All other dip switches should be **OFF**).
INITIALIZING SYSTEM **OFFSET: +0.000 °C** **CURRENT STEAM TEMP CALIBRATION DATA** **PLEASE RECORD *** **<START> TO CONTINUE**	Plug Unit in. (**IMPORTANT***: Always record the displayed Offset Temperature [+0.000 °C]) Press **START** Button
STEAM TEMP OFFSET **+0.00X °C** **<UNWRAP> -0.1 C** **<WRAPPED> +0.1 C** **<STOP> TO CANCEL** **<START> TO SAVE**	To change the Steam (Side) Offset Temperature depress the **UNWRAP** or **WRAP** button: Each time **UNWRAP** is depressed, increases reading 1 digit. Depressing **WRAP** advances cursor to next digit (0.000). Pressing **STOP** here will **cancel** saving STEAM TEMP OFFSET data. Pressing **START** here will **save** STEAM TEMP OFFSET data.
STEAM TEMP CALIBRATION MODE SUCCESSFUL **UNPLUG / RE-PLUG UNIT** **<UNWRAP> -0.1 C** **<WRAPPED> +0.1 C**	Display after **START** was depressed
STEAM TEMP CALIBRATION MODE CANCELLED **UNPLUG / RE-PLUG UNIT**	Display after **STOP** was depressed **IMPORTANT:** Place SW2 dip switch **#3** back to **OFF** position.

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PRESSURE CALIBRATION

Pressure Calibration (SW2 #2 Switch)	
Display	**Action**
	WARNING: Unplug Unit. Place SW2 dip switch **#2 ON**. (All other dip switches should be **OFF**).
INITIALIZING SYSTEM **SPAN: +1.000** **OFFSET: +0.000 KPA** **CURRENT PRESSURE CALIBRATION DATA** **PLEASE RECORD*** **<START> TO CONTINUE**	Plug Unit in. (**IMPORTANT**: Always Record the displayed SPAN [+1.000] and OFFSET [+0.000 KPA].) Press **START** Button
PRESSURE SPAN **+ 1.000** **<UNWRAP> INCR. DIGIT** **<WRAP> NEXT DIGIT** **<STOP> TO CANCEL** **<START> TO SAVE**	To change the Pressure Span depress the **UNWRAP** or **WRAP** button : Each time **UNWRAP** is depressed, increases reading 1 digit. Depressing **WRAP** advances cursor to next digit (0.000). Pressing **STOP** here will **cancel** ALL saving data. Pressing **START** here will **save** ONLY Pressure Span data.
PRESSURE OFFSET **+0.000 KPA** **<UNWRAP> INCR. DIGIT** **<WRAP> NEXT DIGIT** **<STOP> TO CANCEL** **<START> TO SAVE**	To change the Pressure Offset depress the **UNWRAP** or **WRAP** button : Each time **UNWRAP** is depressed, increases reading 1 digit. Depressing **WRAP** advances cursor to next digit (0.000). Pressing **STOP** here will ONLY **cancel** saving Offset data. Pressing **START** here will **save** ONLY Pressure Offset data.
PRESSURE CALIBRATION MODE SUCCESSFUL **UNPLUG / RE-PLUG UNIT** **SPAN +1.000** **OFFSET +0.000 KPA**	Display after **START** was depressed
PRESSURE CALIBRATION MODE CANCELLED **UNPLUG / RE-PLUG UNIT**	Display after **STOP** was depressed **IMPORTANT:** Place SW2 dip switch **#2** back to **OFF** position.

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